

REMARKS

Upon entry of this amendment, claims 1-2, 5, 7-9, 10-14, and 16-29 will be pending in the application. Claims 3, 4, 6, 30-38 and 40-75 are cancelled as drawn to non-elected inventions. Claims 15 and 39 are additionally cancelled. Claim 1 has been amended to incorporate the subject matter of claim 15. Claim 16 has been amended to depend from claim 1 instead of claim 15. Claim 9 has been amended. Support for the amendment to claim 9 appears in original claim 1. No new matter has been added. The cancelled claims do not represent an admission by Applicants that the subject matter is not patentable. Applicants reserve the right to pursue the subject matter of all cancelled claims in a continuing application.

The claims have been rejected for lack of utility, lack of enablement, indefiniteness, anticipation and obviousness.

Rejections under 35 USC §§ 101 and 112, first paragraph

Claim 9 is rejected for lack of utility. Claim 9 has been amended to require that polypeptide comprises a retro-inverso isomer of the amino acid sequence of GWGQPHGG (SEQ ID NO:1), thereby obviating the rejection. Applicants request that this rejection be withdrawn.

Rejection under 35 USC § 112, first paragraph

Claims 1, 2, 5, 7-15, 18-29, and 39 have been rejected for overbreadth. Claim 15 has been cancelled. The rejection is traversed to the extent it is applied to the claims as amended.

The claims have been amended to specify that they are drawn to a ligand with designated amino acids in various recited positions. To the extent the Examiner alleges the claims are overly broad for encompassing peptides that do not bind prions, Applicants note that the claims require that the ligand bind a polypeptide comprising the amino acid sequence GWGQPHGG (SEQ ID NO:1) or a polypeptide analog comprising amino acid analogs that are retro-inverso isomers of the amino acid sequence GWGQPHGG. Thus, inoperative embodiments, i.e.,

peptides that do not bind to a polypeptide that includes the recited amino acid sequence, are excluded from the scope of the claims.

In addition, the claims as amended now encompass ligands with the peptide sequences recited in original claim 15. As noted by the Examiner with respect to the subject matter of original claim 15, the claims do not encompass an excessively large number of potential peptides, and assays for determining binding ability can be easily performed. Thus, one of ordinary skill in the art can readily practice the full scope of the claimed invention without undue experimentation.

Reconsideration and withdrawal of the rejection for overbreadth is requested.

35 USC § 112, second paragraph

Claim 17 is rejected as indefinite for the recitation of “SEQ ID NOs: 3-29 or SEQ ID NO: 30.” Examiner alleges that it is unclear whether a peptide is claimed comprising all the sequences of SEQ ID NOs: 3-29 or a peptide comprising SEQ ID NO:30, or one of the peptides of SEQ ID NOs: 3-30. To facilitate prosecution, Applicants have amended claim 17 to recite “SEQ ID NOs: 3-30.”

Claim 9 is also rejected as indefinite. Claim 9 has been amended to read on the retro-inverso isomer of SEQ ID NO:1.

Reconsideration and withdrawal of the rejections for indefiniteness is requested.

Rejection under 35 USC 102(b)

Claims 1, 2, 5, 7, 8, 10, 18, 20 and 39 are rejected as anticipated by Soto-Jara et al., WO96/39834 (“Soto-Jara”). Claim 39 has been cancelled. Claim 1, from which the remaining claims subject to the rejection depend, has been amended to incorporate the subject matter of claim 15, which is not subject to the rejection. Therefore, the claims as amended are drawn to an invention that is not described by Soto-Jara. Reconsideration and withdrawal of the rejection is requested.

Rejections under 35 USC 102(e)

Claims 1, 2, 5, 7, 8, 10, 18, 20 and 39 are rejected as anticipated by Chesebro et al., US Patent No. 6,211,149 ("Chesebro"). Claim 39 has been cancelled. Claim 1, from which the remaining claims subject to the rejection depend, has been amended to incorporate the subject matter of a claim (claim 15) that is not subject to the rejection. Therefore, the claims as amended are drawn to an invention that is not described by Chesebro. Reconsideration and withdrawal of the rejection is requested.

Claims 1, 2, 5, 7, 8, and 18 are rejected as anticipated by Prusiner et al., US Patent No. 6,211,149 ("Prusiner"). Claim 1, from which the remaining claims subject to the rejection depend, has been amended to incorporate the subject matter of claim 15, which is not subject to the rejection. Therefore, the claims as amended define an invention that is not described by Prusiner. Reconsideration and withdrawal of the rejection is requested.

Rejections under 35 USC 103(a)

Claims 11 and 20-24 are rejected as unpatentable over Chesebro in view of Prusiner. These claims depend from claim 1, which has been amended to incorporate subject matter of a claim (claim 15) not subject to this rejection. Accordingly, the invention now claimed is non-obvious in view of the cited references. Reconsideration and withdrawal of the rejection is requested.

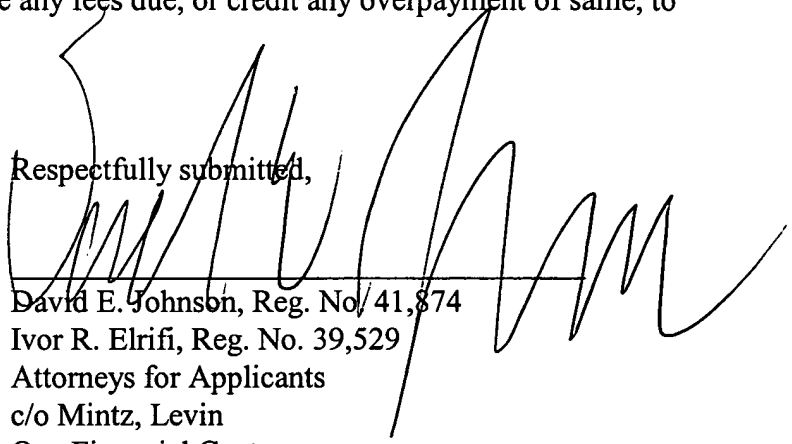
CONCLUSION

On the basis of the foregoing amendments, Applicants respectfully submit that the pending claims are in condition for allowance. The Examiner is encouraged to contact the undersigned with any questions at the telephone number provided below.

Applicant: Hammond et al.
USSN: 09/543,188

The Examiner is authorized to charge any fees due, or credit any overpayment of same, to
Deposit Account 50-0311, Ref. 18242-507.

Respectfully submitted,



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Version with Markings to Show Changes Made

Amend the claims as follows:

1. (Amended) A ligand less than about 6 kDa, which binds to a polypeptide comprising the amino acid sequence GWGQPHGG (SEQ ID NO:1) or a polypeptide analog comprising amino acid analogs that are retro-inverso isomers of the amino acid sequence GWGQPHGG (SEQ ID NO:1), wherein said ligand includes the amino acid sequence $X_1X_2X_3X_4X_5X_6$ (SEQ ID NO:40), provided that

X_1 is L, W, or I;

X_2 is L, Q, F, or L;

X_3 is I, Y, V, F, or L;

X_4 is W or V;

X_5 is I; and

X_6 is P, A, F, K, or A.

9. (Amended) The peptide ligand of claim [7] 1, wherein said polypeptide comprises a retro-inverso isomer of the amino acid sequence of [D(GGHPQGWG) (SEQ ID NO:34)]
GWGQPHGG (SEQ ID NO:1).

16 (Amended) The peptide ligand of claim [15] 1, wherein said peptide ligand comprises an amino acid sequence selected from the group consisting of LLIWIP (SEQ ID NO:3), WLYWIP (SEQ ID NO:4), WL VWIA (SEQ ID NO:27), IQIWIF (SEQ ID NO:21), IFFWIK (SEQ ID NO:23), and LLLVIA (SEQ ID NO:13).

17. (Amended) The peptide ligand of claim 7, wherein said peptide ligand comprises the amino acid sequence of a peptide with one of the amino acid [sequence] sequences of [SEQ ID NOs: 3-29 or SEQ ID NO:30] SEQ IDs 3-30

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